

5/25

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	22766
<b>Description:</b> Crosstube Extrusion (OH-58)		<b>Part Number:</b>	D6005-128
<b>Dwg:</b> D6005 Rev. A		<b>Qty:</b>	18
		Page 1 of 1	

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	HA	05.03.18	18
2	PG	Issue P/O: <u>2007702</u> a) Order as per Dwg D6005 b) Material: 2.750 x 0.375 wall 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube c) Minimum ultimate tensile strength = 77 ksi d) Minimum tensile yield strength = 66 ksi e) Tolerance are per ASTM B210 (see details on Dwg D6005) f) <b>Material certification required</b>	W	05.03.18	18
3	RG	Receive and Inspect for transit damage <b>Ensure Material certification is attached</b>	CL	05.07.08	18
4	QC6	Inspect Level 6 <b>Ensure Material certification comply to Dwg D6005</b>	me	05.10.26	18
5	FP	<u>Chemical Conversion Coat as per QSI 005 4.1</u>			
6	QC3	<u>Inspect Chemical Conversion Coat</u>	N/A		
7	ST	Identify and Stock	CL	05.10.26	18
8	AC	Cost / part: <u>393.60</u>	Juc	05.10.26	18
9	DC	Close W/O <u>391.99</u> Inspect Level 21	CS	05.10.26	18

Rev	Date	Change	Revised By	Approved
A	00.11.21	New Issue	EC	
B	00.12.06	Added: Issue P/O	EC	
C	04.06.15	Added tolerance to Step 2	KJ/JLM	

RELEASED

04-06-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: LP Date: 05/01/28

NOTE: Date & initial all entries

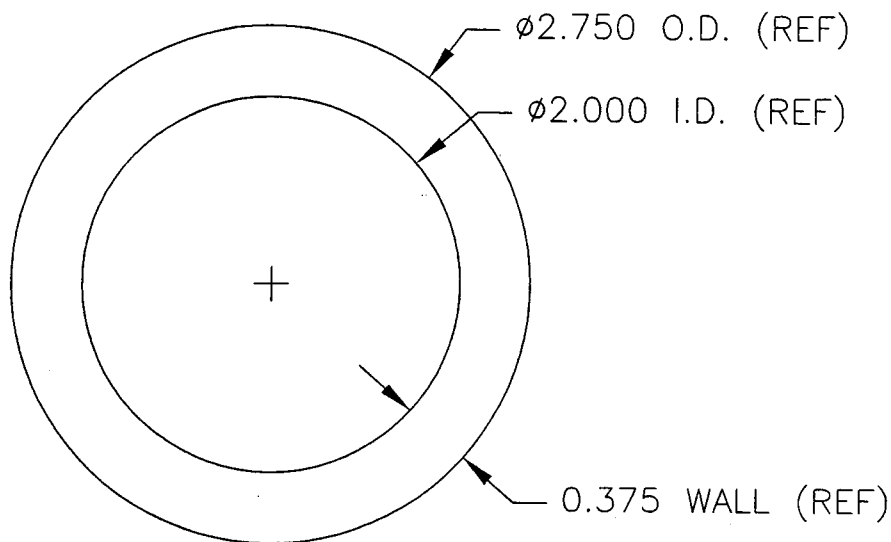
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN <i>CP</i>		DRAWN BY <i>CP</i>		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>		APPROVED <i>A</i>		DRAWING NO. D6005	REV. A SHEET 1 OF 1
DATE 00.11.17		TITLE CROSSTUBE MATERIAL		SCALE 1:1	
A	00.11.17		NEW ISSUE		

# SPECIFICATION CONTROL DRAWING

RELEASED  
00.11.24 *ff*



## NOTES

- 1) D6005-XXX CROSSTUBE  
          └──┘  
          LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 128" LONG TUBE: D6005-128

- 2) MATERIAL: 2.750 OD x 0.375 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR Y  
QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.006$  MEAN ( $\pm 0.012$  INCLUDING OVALITY)  
WALL:  $\pm 0.015$  MEAN ( $\pm 0.038$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.125/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOP COPY

RETURN TO  
ENGINEERING

OR QQ-A-225/9 OR  
THE COPY  
T T  
WHICH NOTICE

# WORK ORDER

NO. 22766

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# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Mar 17, 2005  
04:26 pm

Work Order No : 0022766  
Project Name : D6005-128  
Project For : WK525  
Work Order Type : Main  
Main WO Number :  
House Part Number : D6005-128  
Description : Crosstube material  
Manufactured : Yes  
Amount Req'd : 18  
Amount Done : 0  
Start Date : 03-17-05  
Est Finish Date : 06-10-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%

\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

**ALUnna**

## Abnahmeprüfzeugnis 3.1 - EN 10204:2004

Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004

**Kunde:**  
**Client:**

Dart Aerospace Ltd.

1270 Aberdeen Street  
K6A1K7 Hawkesbury, ON Canada  
Tubes seamless extruded

**Produkt:**

Product / Produit:

**Spezifikation:**

Specification:

**Werkstoff:**

Alloy/Alliage:

**Abmessung**

Size / Dimension

**Kennzeichnung**

Marking/Marquage:

**Lieferung**

Delivered Material / Matériel délivré:

AMS QQ-A-200/11E &amp; ASTM B 210

7075

2,750" x 2,000" x 0,375" x 128,00"

ALUnna - Cert no. 380/05 - 7075 - T 6511 - Cast No. 79307 - QQA 200/11E - 2.750" OD X 0.375" Wall - Heat No.  
81/05 - Lot 13568/1-1 PO. 2007762

**Zeugnisnummer:**

Cert No.: / No. du certificat:

**Bestellnummer:**

Order No. / No. de commande

**Auftrag:**

Our Reference/Notre Référence:

200762

13568/1

**Zustand:**

Temper/Etat

T 6511

pcs.

18

lbs

666

### 1. Chemische Analyse

### Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
79307	0,112	0,186	1,40	0,031	2,47	0,188	5,86	0,037	0,005	0,026	0,001		0,006

Elements without indication &lt; 0,01 %

### 2. Mechanische Eigenschaften

### Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Heat No.
min.	77,0	66,0				
max.						
1	85,260	78,735	11,7		153	81/05
2	85,695	79,315	11,7		154	81/05

**Ergebnis der  
Prüfungen:**

Test results:  
Resultats:

GschwindU

03.06.05

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order  
Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande



Certified acc. to DIN EN ISO 9001:2000, valid until 2006-03-09  
Certificate No.: 001959 QM



ALUnna

Abnahmebeauftragter